

Geology 508 – Spring/Summer 2008- Syllabus

The Geology 508 mapping project this year is located in the Laguna Mountains SE of San Diego, California. Located within the study area are the Lucky 5 and Oriflamme Canyon plutons. The Lucky 5 pluton underlies much of the western part of the project area while the Oriflamme Canyon pluton makes up most of the eastern part. Though Todd et al. (2003) did not distinguish these two plutons from each other, recent laser ablation ICP-MS zircon study indicates that the Lucky 5 is 130.3 ± 2.6 Ma while the Oriflamme Canyon pluton is 116.1 ± 2.4 Ma (Biggs et al., 2008). A thin strip, about 2.5 km wide, of the Triassic Julian Schist separates the two plutons. The purpose of the mapping project is to identify, map, and characterize structures that formed prior to and during the emplacement of the Lucky 5, and to assess how those older structures were modified during the emplacement of the younger Oriflamme Canyon pluton. Each student is required to spend a minimum of 20 days working in the field, and an additional 14 days completing (1) laboratory work, (2) a digital copy of their field map, (3) digital copies of their cross sections, and (4) a Geology style manuscript outlining the results of their work. As soon as the thin sections are returned from San Diego Petrographics I will email you and set up a time for you to begin evaluating the metamorphic petrology of the Julian Schist and the textural attributes of the foliated margin of the Lucky 5 and the Oriflamme Canyon pluton.

Manuscripts that you are required to read and reference in your report are available on the following web site: <http://www.geology.sdsu.edu/classes/geol508/>. Additional readings will be handed out during required meetings that will take place during the last 4 weeks of the spring semester and the first 2 weeks of summer 2008. Please check the web site at least once a week.

Your grade will be determined by the quality of the following materials:

1. Your inked in and colored field map (25 points)
2. A printed copy of your digital map and stereonet (25 points)
3. Printed copies of your cross-sections (25 points)
4. Your completed and handed in manuscript (25 points)

Though I would like to have your final manuscript by Monday, June 2, 2008, I realize that some of you have not been able to complete much field work this semester. If you fall into this category, then I am tentatively setting a deadline for Monday June 16 for your completed and handed in manuscript. I will be posting in the next few days on the web site listed above how many days in the field that you have completed. I will update that list as often as necessary.